

REPORT OF THE COUNCIL TO THE SEVENTY-FOURTH ANNUAL  
GENERAL MEETING OF THE SOCIETY.

The following table shows the progress and present state of  
the Society:—

	Compounders	Annual Subscribers	Mathematical Society	Total Fellows	Associates	Patron	Grand Total
December 31, 1892 ... ..	244	373	1	618	48	1	667
Since elected ... ..	+ 4	+ 32	...	...	...	...	...
Deceased ... ..	— 2	— 8	...	...	— 2	...	...
Resigned ... ..	...	— 7	...	...	...	...	...
Removals ... ..	+ 3	— 3	...	...	...	...	...
Expelled ... ..	...	— 1	...	...	...	...	...
December 31, 1893 ... ..	249	386	1	636	46	1	683

*Dr. Common's Account as Treasurer of the Royal*

## RECEIPTS.

Balances, 1893 January 1 :—	£	s.	d.	£	s.	d.
At Bankers', as per Pass Book ... ..	163	16	0			
Country cheques not credited till 1893 ...	8	8	0			
In hand of Assistant Secretary on account of Turnor and Horrox Fund ... ..	10	4	6			
In hand of Assistant Secretary on Petty Cash Account ... ..	1	3	5			
				183	11	11
Dividends on £13,200 Consols, $2\frac{3}{4}$ per cent. ...	353	3	8			
„ on £650 New $2\frac{1}{2}$ -per-cent. Stock ...	15	16	4			
„ on £1,250 Metropolitan 3-per-cent. Stock ...	36	9	0			
				405	9	0
Received on account of Subscriptions :—						
Arrears ... ..	132	6	0			
248 Annual Contributions for 1893 ... ..	520	16	0			
5 „ „ 1894 ... ..	10	10	0			
Admission Fees ... ..	86	2	0			
First Contributions ... ..	56	14	0			
				806	8	0
8 Composition Fees ... ..				168	0	0
Sales of Publications :—						
At Williams & Norgate's, 1892 ... ..	37	11	6			
At Society's Rooms, 1893 ... ..	47	4	3			
				84	15	9
Income Tax for the last 3 years, refunded by the Commissioners of Inland Revenue ... ..				61	6	10

Audited and found correct, 1894 January 10.

W. B. GIBBS,  
ARTHUR COTTAM,  
RICHARD INWARDS.

---

£1,709 11 6

---

*Astronomical Society, from 1893 January 1 to December 31.*

EXPENDITURE.

[illegible]

*Report of the Auditors.*

We have examined the Treasurer's accounts for the year 1893, and have found and certified the same to be correct. The cash in hand on 1893 December 30, including the balance at the bankers', &c., amounted to £376 19s. 6d.

The funded property of the Society is the same as at the end of last year.

The books, instruments, and other effects in the possession of the Society have been examined, and they appear to be in a satisfactory condition.

We have laid on the table a list of the names of those Fellows who are in arrear for sums due at the last Annual General Meeting of the Society, with the amount due against each Fellow's name.

(Signed) W. B. GIBBS,  
ARTHUR COTTAM,  
RICHARD INWARDS.

January 10, 1894.

*Trust Funds.*

*The Turnor Fund*: A sum of £450 2 $\frac{3}{4}$ -per-cent. Consols, the interest to be used in the purchase of books for the Library.

*The Horrox Memorial Fund*: A sum of £100 2 $\frac{3}{4}$ -per-cent. Consols, the interest to be used in the purchase of books for the Library.

*The Lee and Janson Fund*: A sum of £323 16s. 3d. 2 $\frac{3}{4}$ -per-cent. Consols, the interest to be given by the Council to the widow or orphan of any deceased Fellow or Associate of the Society who may stand in need of it.

*Assets and Present Property of the Society, 1894 January 1.*

Balances, 1893 December 30:—	£	s.	d.	£	s.	d.
At Bankers' ... ..	365	15	11			
In hand of Assistant Secretary on account of						
Turnor and Horrox Funds ... ..	11	2	3			
In hand of Assistant Secretary on Petty Cash						
Account ... ..	0	1	4			
				376	19	6
Due on account of Subscriptions:—						
5 Contributions of 4 years' standing ... ..	42	0	0			
13       "       3       "       ... ..	81	18	0			
29       "       2       "       ... ..	121	16	0			
64       "       1       "       ... ..	134	8	0			
Admission Fees, &c. ... ..	7	7	0			
Other Amounts ... ..	9	9	0			
	396	18	0			
Less 5 Contributions paid in advance ... ..	10	10	0			
				386	8	0
Due from Messrs. Williams & Norgate for sales of Publica-						
tions during 1893 ... ..				14	19	3
£13,200 2 $\frac{3}{4}$ -per-cent. Consols, including the Lee and Janson Fund,						
the Turnor Fund, the Horrox Memorial Fund, and Mrs.						
Jackson Gwilt's gift.						
£650 New 2 $\frac{1}{2}$ -per-cent. Consols.						
£1,250 Metropolitan 3-per-cent. Stock.						
Astronomical and other Manuscripts, Books, Prints, and Instru-						
ments; Furniture, &c.						
Unsold Publications of the Society.						
3 Gold Medals.						

Stock in hand of volumes of the *Memoirs*:—

Vol.	At Society's Rooms	At Williams & Norgate's	Vol.	At Society's Rooms	At Williams & Norgate's
I. Part 1	7	...	XXX.	156	...
I. Part 2	42	...	XXXI.	139	...
II. Part 1	51	3	XXXII.	151	...
II. Part 2	17	3	XXXIII.	159	1
III. Part 1	65	...	XXXIV.	162	3
III. Part 2	84	...	XXXV.	107	4
IV. Part 1	77	3	XXXVI.	190	8
IV. Part 2	90	3	XXXVII. Part 1	335	8
V.	102	3	XXXVII. Part 2	281	8
VI.	120	6	XXXVIII.	266	1
VII.	142		XXXIX. Part 1	234	3
VIII.	126	3	XXXIX. Part 2	239	3
IX.	133	3	XL.	257	1
X.	143	...	XLI.	406	1
XI.	152	...	XLII.	231	3
XII.	159	...	XLIII.	234	1
XIII.	158	...	XLIV.	213	1
XIV.	361	...	XLV.	246	...
XV.	137	...	XLVI.	226	3
XVI.	163	1	XLVII. Part 1	3	...
XVII.	146	1	XLVII. Part 2	18	...
XVIII.	138	1	XLVII. Part 3	2	...
XIX.	145	1	XLVII. Part 4	10	...
XX.	139	1	XLVII. Part 5	8	...
XXI. Part 1	310	...	XLVII. Part 6	9	...
XXI. Part 2	98	...	XLVII.	199	2
XXI. 1 & 2 (together)	59	1	XLVIII. Part 1	244	1
XXII.	161	1	XLVIII. Part 2	249	1
XXIII.	145	1	XLIX. Part 1	422	1
XXIV.	148	1	XLIX. Part 2	270	1
XXV.	163	...	L.	317	1
XXVI.	169	1	Index to <i>Memoirs</i> }	635	1
XXVII.	421	1			
XXVIII.	380	...			
XXIX.	402	...			

Stock in hand of volumes of the *Monthly Notices* :—

Vol.	At Society's Rooms	At Williams & Norgate's	Vol.	At Society's Rooms	At Williams & Norgate's
I.	60	...	XXVIII.	71	...
II.	62	...	XXIX.	51	...
III.	...	...	XXX.	64	2
IV.	...	...	XXXI.	92	...
V.	...	...	XXXII.	113	5
VI.	47	...	XXXIII.	95	...
VII.	2	...	XXXIV.	67	1
VIII.	153	2	XXXV.	57	...
IX.	24	3	XXXVI.	28	1
X.	172	1	XXXVII.	35	3
XI.	184	...	XXXVIII.	98	2
XII.	106	2	XXXIX.	95	1
XIII.	178	2	XL.	108	3
XIV.	177	3	XLI.	108	5
XV.	169	2	XLII.	117	1
XVI.	154	2	XLIII.	114	2
XVII.	167	1	XLIV.	119	2
XVIII.	244	...	XLV.	119	1
XIX.	54	...	XLVI.	114	...
XX.	34	...	XLVII.	132	2
XXI.	17	...	XLVIII.	124	1
XXII.	33	...	XLIX.	118	9
XXIII.	19	...	L.	120	11
XXIV.	24	...	LI.	122	11
XXV.	15	...	LII.	120	13
XXVI.	10	1	LIII.	122	19
XXVII.	3	...	Index ...	562	3
LIBRARY CATALOGUE ... ..			568 3		

In addition to the above volumes of the *Monthly Notices*, the Society has a considerable stock of separate numbers of nearly all the volumes. With the exception, however, of Vols. XXXVI. to LIII., no complete volumes can be formed from the separate numbers in stock.

*Instruments belonging to the Society.*

- No. 1. The *Harrison* clock.  
 „ 2. The *Owen* portable circles, by Jones.  
 „ 3. The *Beaufoy* circle.  
 „ 4. The *Beaufoy* transit instrument.  
 „ 5. The *Herschel* 7-foot telescope.  
 „ 6. The *Greig* universal instrument, by Reichenbach and Ertel. The transit telescope, by Utzschneider and Fraunhofer, of Munich.  
 „ 7. The *Smeaton* equatorial.  
 „ 8. The *Cavendish* apparatus.  
 „ 9. The 7-foot Gregorian telescope (late Mr. Shearman's).  
 „ 10. The variation transit instrument (late Mr. Shearman's).  
 „ 11. The universal quadrat, by Abraham Sharp.  
 „ 12. The *Fuller* theodolite.  
 „ 13. The standard scale, by Troughton and Simms.  
 „ 14. The *Beaufoy* clock, No. 1.  
 „ 15. The *Beaufoy* clock, No. 2.  
 „ 16. The *Wollaston* telescope.  
 „ 17. The *Lee* circle.  
 „ 18. The *Sharpe* reflecting circle.  
 „ 19. The *Brisbane* circle.  
 „ 20. The *Baker* universal equatorial.  
 „ 21. The *Reade* transit.  
 „ 22. The *Matthew* equatorial, by Cooke.  
 „ 23. The *Matthew* transit instrument.  
 „ 24. The *South* transit instrument.  
 „ 25. A sextant, by Bird (formerly belonging to Captain Cook).  
 „ 26. A globe showing the precession of the equinoxes  
     The *Sheepshanks* collection :—  
 „ 27. (1) 30-inch transit instrument, by Simms, with level and two iron stands.  
     28. (2) 6-inch transit theodolite, with circles divided on silver; reading microscopes, both for altitude and azimuth; cross and siding levels; magnetic needle; plumb-line; portable clamping foot and tripod stand.  
 „ 29. (3) Equatorial stand and clock movement for  $4\frac{6}{10}$ -inch telescope (telescope lost); double-image micrometer; two wire micrometers; object-glass micrometer.  
 „ 30. (4)  $3\frac{1}{4}$ -inch achromatic telescope, with equatorial stand; double-image micrometer; one terrestrial and three astronomical eyepieces.

- No. 31. (5)  $2\frac{3}{4}$ -inch achromatic telescope, with stand; one terrestrial and three astronomical eyepieces.
- „ 33. (7) 2-foot navy telescope.
- „ 34. (8) Transit instrument of 45 inches focal length, with iron stand and also Ys for fixing to stone piers; two axis levels.
- „ 35. (9) Repeating theodolite, by Ertel, with folding tripod stand.
- „ 36. (10) 8-inch pillar sextant, by Troughton, divided on platinum, with counterpoise stand and artificial horizon.
- „ 37. (11) Portable zenith telescope and stand,  $2\frac{3}{4}$ -inch aperture and 26 inches focal length; 10-inch horizontal circle and 8-inch vertical circle, read to  $10''$  by two verniers to each circle.
- „ 38. (12) 18-inch Borda repeating circle, by Troughton,  $2\frac{1}{8}$ -inch aperture and 24 inches focal length; the circles divided on silver, the horizontal circle being read by four verniers, and the vertical circle by three verniers, each to  $10''$ .
- „ 39. (13) 8-inch vertical repeating circle, with diagonal telescope, by Troughton and Simms; circle divided on silver, reading to  $10''$ ; a 5-inch circle at eye-end, reading to single minutes; horizontal circle 9 inches diameter in brass, reading to single minutes.
- „ 40. (14) A set of surveying instruments, consisting of a 12-inch theodolite for horizontal angles only, reading to  $10''$ ; two sets of adjusting plates; tripod stand with enclosed telescope; heavy stand for theodolite; Y piece of level; two large and three small ground-glass bubbles divided; level collimator, object-glass  $1\frac{5}{8}$ -inch diameter and 16 inches focal length; micrometer eyepiece, comb, and wires; mercury bottle and trough.
- „ 41. (15) Level collimator, with object-glass  $1\frac{7}{8}$ -inch diameter and 16 inches focal length; stand, rider-level, and fittings.
- „ 42. (16) 10-inch reflecting circle, by Troughton, reading by three verniers to  $20''$ ; counterpoise stand; artificial horizon, with mercury; two tripod stands.
- „ 43. (17) Hassler's reflecting circle, by Troughton, with counterpoise stand.
- „ 44. (18) 6-inch reflecting and repeating circle, by Troughton and Simms, contained in three boxes, two of which form stands. Circle divided on silver, reading to single minutes; two inside arcs divided to single degrees, 150 degrees on each side; artificial horizon and mercury.

- No. 45. (19) 5-inch reflecting and repeating circle, by Lenoir, of Paris.
- „ 46. (20) Reflecting circle, by Jecker, of Paris, 11 inches in diameter, with one vernier reading to 15''.
- „ 47. (21) Box sextant; reflecting plane and level.
- „ 48. (22) Prismatic compass, by Troughton and Simms.
- „ 49. (23) Mountain barometer.
- „ 50. (24) Prismatic compass, by Thomas Jones, mounted with a cylindrical lens.
- „ 51. (25) Ordinary  $4\frac{1}{2}$ -inch compass with needle.
- „ 52. (26) Dipping needle, by Robinson.
- „ 53. (27) Compass needle, mounted for variation.
- „ 54. (28) Magnetic intensity needle, by Meyerstein, of Göttingen; a strongly fitted brass box with heavy magnet; filar suspension.
- „ 55. (29) Box of magnetic apparatus.
- „ 56. (30) Hassler's reflecting circle, by Troughton; a  $10\frac{1}{2}$ -inch reflecting and repeating circle, with stand and counterpoise, divided on platinum with two movable and two fixed indices; four verniers reading to 10''.
- „ 57. (31) Box sextant and glass plane artificial horizon, by Troughton and Simms.
- „ 58. (32) Plane  $2\frac{3}{8}$ -inch speculum, artificial horizon, and stand.
- „ 59. (33)  $2\frac{1}{2}$ -inch circular level horizon, by Dollond.
- „ 60. (34) Artificial horizon, roof, and trough; the trough  $8\frac{1}{4}$  by  $4\frac{1}{2}$  inches; tripod stand.
- „ 61. (35) Set of drawing instruments, consisting of 6-inch circular protractor and common protractor, T-square; one beam compass.
- „ 62. (36) A pantograph.
- „ 63. (37) A noddly.
- „ 64. (38) A small Galilean telescope with object-glass of rock crystal.
- „ 65. (39) Five levels.
- „ 66. (40) 18-inch celestial globe.
- „ 67. (41) Varley stand for telescope.
- „ 69. (43) Telescope, with object-glass of rock crystal.
- „ 71. Portable altazimuth tripod.
- „ 72. Four polarimeters.
- „ 74. Registering spectroscope, with one large prism.
- „ 76. Two five-prism direct-vision spectroscopes.
- „ 78.  $9\frac{1}{4}$ -inch silvered-glass reflector and stand, by Browning.
- „ 79. Spectroscope.
- „ 80. A small box, containing three square-headed Nicol's prisms; two Babinet's compensators; two double-image prisms; three Savarts; one positive eyepiece, with Nicol's prism; one dark wedge.

- No. 81. A back-staff, or Davis' quadrant.
- „ 82. A nocturnal or star dial.
- „ 83. An early non-achromatic telescope, of about 3 feet focal length, in oak tube, by Samuel Scatliffe, London.
- „ 84. A Hollis observing chair.
- „ 85. Double-image micrometer, by Troughton and Simms.
- „ 86.  $4\frac{1}{2}$ -inch Gregorian reflecting telescope, by Short, with altazimuth stand and 6-inch altitude and azimuth circles and two eyepieces.
- „ 87.  $3\frac{1}{4}$ -inch Gregorian reflecting telescope with wooden tripod stand.
- „ 88. Pendulum, with 5-foot brass suspension rod, working on knife-edges, by Thomas Jones.
- „ 89. A Rhabdological Abacus. A contrivance invented by Mr. H. Goodwyn, consisting of a box filled with compartments, in which are square rods covered with numbers, which can be arranged so as to facilitate the labour of multiplying high numbers.
- „ 90. An Arabic celestial globe of bronze,  $5\frac{3}{4}$  inches in diameter.
- „ 91. Astronomical time watchcase, by Professor Chevalier.
- „ 92. 2-foot protractor, with two movable arms, and vernier.
- „ 93. Beam compass, in box.
- „ 94. 2-foot navigation scale.
- „ 95. Stand for testing measures of length.
- „ 96. Artificial planet and star, for testing the measurement of a fixed distance at different position-angles.
- „ 97. 12-cell Leclanché battery.
- „ 98. 2-foot 6-inch navy telescope, with object-glass  $2\frac{1}{2}$  inches, by Cooke, with portable wooden tripod stand.
- „ 99. 12-inch transit instrument, by Fayrer and Son, with level and portable stand.
- „ 100. 9-inch transit instrument, with level and iron stand.
- „ 101. Small equatorial sight instrument, by G. Adams, London.
- „ 102. Sun-dial, by Troughton.
- „ 103. Sun-dial, by Casella.
- „ 104. Sun-dial
- „ 105. Box sextant, by Troughton and Simms.
- „ 106. Prismatic compass, by Schmalcalder, London.
- „ 107. Compass, by C. Earle, Melbourne.
- „ 108. Prismatic compass, by Negretti and Zambra.
- „ 109. Dipleidoscope, by E. Dent.

- No. 110. Abney level, by Elliott.  
 „ 111. Pocket spectroscope, by Browning.  
 „ 112. Universal sun-dial.  
 „ 113. Double sextant, by Jones.  
 „ 114. Two models, illustrating the effects of circular motions.  
 „ 115. A cometarium.  
 „ 116. A pair of 18-inch globes.  
 „ 117 } Two old sun-dials.  
 „ 118 }  
 „ 119. Specimens of diffraction gratings, by Prof. W. A. Rogers.  
 „ 120. A 6-prism spectroscope, by Browning.  
 „ 121. Spitta's improved maximum and minimum thermometer.  
 „ 122. A 6-inch speculum, with flat; the speculum said to be by Sir W. Herschel, and refigured by Sir J. Herschel.  
 „ 123. A 6-inch refracting telescope, by Grubb, with 3 eyepieces.  
 „ 124. Position micrometer, by Cooke.  
 „ 125. A 6-inch refracting telescope, by Simms, with eyepieces and solar diagonal.  
 „ 126.  $3\frac{1}{2}$ -in. portable refracting telescope, by Tulley, with tripod stand.  
 „ 127. Globe representing the visible surface of the Moon, by John Russell, R.A. (1797).  
 „ 128. Bichromate battery and Ruhmkorff coil.  
 „ 129. Slater's improved armillary sphere, presented by Prof. Slater.  
 „ 130. 10-inch brass pillar sextant, by Troughton, presented by Dr. Nevins as executor of the late Mr. A. E. Nevins.  
 „ 131. Double box sextant, by Cary, presented by Dr. Nevins as executor of the late Mr. A. E. Nevins.

Besides the above, there is the following apparatus available for Eclipse work :—

- 4 Slits for Spectroscope.  
 2 Abney lenses used in photographing the Corona.  
 2 Dallmeyer negative enlarging lenses.

The following instruments are lent, during the pleasure of the Council, to the undermentioned persons :—

- No. 4. The *Beaufoy* transit instrument, to the Observatory, Kingston, Canada.  
 „ 10. Variation transit, to Mr. Maxwell Hall.  
 „ 16. The *Wollaston* telescope, to Mr. R. Inwards.  
 „ 22. The *Matthew* equatorial, to Mr. J. Brett.

- No. 23. The *Matthew* transit, to Captain W. Noble.  
 „ 28. (2) 6-inch theodolite and stand, to Capt. D. Forbes.  
 „ 29. (3) Wire micrometer (No. 1), to Mr. C. Thwaites.  
 „ „ „ Wire micrometer (No. 2), to Mr. Maxwell Hall.  
 „ 30. (4)  $3\frac{1}{4}$ -inch equatorial and stand, to Mr. E. B. Powell.  
 „ „ „ Double-image micrometer, to Mr. Maxwell Hall.  
 „ 31. (5)  $2\frac{3}{4}$ -inch telescope and stand, to Mr. F. J. Wardale.  
 „ 36. (10) 8-inch sextant, to Mr. C. H. Johns.  
 „ 38. (12) 18-inch *Borda* repeating circle, to Mr. Maxwell Hall.  
 „ 39. (13) 8-inch repeating circle, to Mr. J. Norman Lockyer.  
 „ 42. (16) Artificial horizon, roof, and mercury bottle, to Mr. C. Thwaites.  
 „ 50. (24) Prismatic compass, to Mr. Maxwell Hall.  
 „ 52. (26) Dipping needle, to Mr. Maxwell Hall.  
 „ 54. (28) Magnetic intensity needle, to Mr. Maxwell Hall.  
 „ 69. (43) Telescope, with rock-crystal object-glass, to Dr. W. Huggins.  
 „ 76. 5-prism direct vision hand Spectroscope, to Mr. E. B. Knobel.  
 „ 78.  $9\frac{1}{4}$ -inch reflector and stand, to Mr. Maxwell Hall.  
 „ 79. Spectroscope, to Mr. Maxwell Hall.  
 „ 85. Double-image micrometer, to Mr. B. T. Moore.  
 „ 99. 12-inch portable transit instrument, to Mr. H. T. Vivian.  
 „ 120. 6-prism spectroscope, by Browning, to Mr. C. Thwaites.  
 „ 123. 6-inch refractor, by Grubb (object-glass only), to Mr. W. E. Wilson.  
 „ 124. Position micrometer, by Cooke, to the Rev. A. Freeman.  
 „ 126.  $3\frac{1}{2}$ -inch portable refractor, by Tulley, to Mr. H. Sadler.

### *The Gold Medal.*

The Council have awarded the Society's Gold Medal to Mr. S. W. Burnham for his discoveries and measurements of Double Stars.